

# Product Support Bulletin

---

Subject: Proper Method for Running Benchmark and Diagnostics Programs

Date: 06/04/93

Page(s): 1 of 1

PSB No: S-0158

Originator: MWT

This bulletin describes the proper method for running any benchmark or diagnostics programs. This applies to any computer system.

In most cases, the computer should be started using an MS-DOS boot diskette that's 'clean' - in other words, one with no CONFIG.SYS or AUTOEXEC.BAT files. The appropriate executable can then be run, either from diskette or hard drive.

There will be some exceptions to the above rule. In attempting to benchmark or troubleshoot any add-on that requires a device driver (CD-ROM, local area network, etc.), obviously the necessary device driver(s) must be loaded. Also, some programs will require a minimum number of FILES or BUFFERS to be defined in the CONFIG.SYS file. Such programs will usually display this requirement if they are run without the necessary CONFIG.SYS file.

For the most consistent results, use the absolute minimal boot configuration that's allowed by the hardware being tested.

# Product Support Bulletin

Subject: Equity/Apex Compatibility with the SOTA 386si

Date: 3/02/90

Page: 1 of 3

PSB No: S-0111

Originator: KAS : as

The purpose of this bulletin is to provide the 80386 Accelerator board test results, conducted by the Computer Product Support Center, involving the SOTA 386si from SOTA Technology, inc.

The Equity models tested were the Equity I, Equity II Equity I + and Equity Ie. The Apex models tested were the Apex, Apex Plus and Apex 100. All were tested with Norton Utilities and MS - DOS.

The table below shows compatibility and the Norton SI rating of the various systems.

| <u>Model</u> | <u>Norton SI</u> | <u>Compatibility</u>  |
|--------------|------------------|---|
| Equity I     | 12.0             | Functioned normally with Norton Utilities and MS- DOS 2.11  |
| Equity I+    | 12.0/16.9        | Functioned normally with MS - DOS 3.3 and Norton Utilities at both CPU speeds.                    |
| Equity Ie    | NA               | Unable to boot at 10MHz. Performance erratic at 4.77MHz   |
| Equity II    | 14.3             | Functioned normally with MS - DOS 3.2 and Norton Utilities. (Tested only at 7.16MHz.)             |
| Apex         | 15.9             | Unable to boot at 4.77MHz. Functioned normally at 8MHz with MS - DOS 3.2 and Norton Utilities.    |
| Apex Plus    | 11.5             | Unable to boot at 9.54MHz. Functioned normally at 4.77MHz with MS - DOS 3.2 and Norton Utilities. |
| Apex 100     | 12.0/16.9        | Functioned normally with MS - DOS 3.3 and Norton Utilities.                                       |

Installation of the board in most of the units was quick and simple to do when following the installation instructions accompanying the boards. Installation of the SOTA 386si in the Equity I and the Equity II is rather difficult. Due to the amount of disassembly required, we strongly recommend that only Authorized Service Centers install the board in the Equity I and Equity II.

### Installation Instructions

#### Equity I

1. Remove the following from the main unit:
  - a) upper case
  - b) rear panel
  - c) front panel
  - d) FDD/power supply block.
2. Follow instructions for a standard installation for the SOTA 386si in an 8088 - based system. Take care to fold the SOTA connector cable so as not to prevent reassembly. The cable is sturdy and will tolerate being folded.
3. Reassemble the main unit and go through the testing and initialization procedure outlined in the SOTA manual.

#### Equity II

1. Remove the following from the main unit:
  - a) upper case
  - b) rear panel
  - c) front panel
  - d) FDD/power supply block.
2. Follow instructions for a standard installation for the SOTA 386si in an 8086 - based system. Take care to fold the SOTA connector cable so as not to prevent reassembly. This will necessitate routing the cable so that it does not conflict with the power connection to the main system board. The cable is sturdy and will tolerate being folded.
3. Reassemble the main unit and go through the testing and initialization procedure outlined in the SOTA manual.

Our Computer Product Support Center receives numerous calls requesting information and recommendations on 80386 Accelerator boards for use with the Equity and Apex (8088- and 8086 - based) personal computers.

We have found that the SOTA 386si may meet your requirements and are competitively priced!

Although these boards were tested by qualified product support specialists, Epson America makes no representations that these third party products are compatible with all hardware configurations or software applications.

We recommend that you certify these products with your specific hardware and software requirements and consult with the third party vendor to ensure reliable operation.

SOTA Technology can be reached at:

SOTA Technology, Inc.  
657 N. Pastoria Ave.  
Sunnyvale, CA 94086  
Phone: (408) 245 - 3366

# Product Support Bulletin

Subject: Equity and Apex Series Compatibility with the System OmniBridge Controller and BridgeFiler External Floppy Drives

Date: 04/11/90  
Page: 1 of 3

PSB No: S-0088B  
Originator: KAS *Kas*

The purpose of this bulletin is to provide the results of compatibility testing conducted by the Computer Product Support Center with the Sysgen OmniBridge controller and Bridge - Filer external floppy disk drives.

| <u>Model</u> | <u>Comments</u>  |
|--------------|--|
| Equity I     | The Equity I was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.   |
| Equity II    | The Equity II was found to be totally incompatible with the OmniBridge controller.   |
| Equity III   | The Equity III was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives. |
| Equity I +   | The Equity I + was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives. |
| Equity Ie    | The Equity Ie was found compatible with the OmniBridge controller. It was able to support only one external floppy drive, unlike the other models tested. The drive could be used as a high density (1.2Mb and 1.44Mb) or normal (360K and 720K) disk drive.   |

|               |   |
|---------------|---|
| Equity II +   | The Equity II + was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.   |
| Equity IIe    | The Equity IIe was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.    |
| Equity III +  | The Equity III + was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.  |
| Equity 386SX  | The Equity 386SX was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.  |
| Equity 386/20 | The Equity 386/20 was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives. |
| APEX          | The Epson APEX was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.    |
| APEX +        | The Epson APEX was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives.    |

|          |  |
|----------|--|
| APEX 100 | The Epson APEX 100 was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives. |
| APEX 200 | The Epson APEX 200 was found compatible with the OmniBridge controller. It was able to support one or two external disk drives (daisy chained) together. The external drives could be used as high density (1.2M and 1.44M) or normal (360K and 720K) disk drives. |

NOTE: The recommended switch settings for the OmniBridge controller are as follows:


|          |          |
|----------|----------|
| 1-1 DOWN | 2-1 DOWN |
| 1-2 DOWN | 2-2 DOWN |
| 1-3 DOWN | 2-3 UP   |
| 1-4 DOWN | 2-4 UP   |

These settings select NO ADDRESS for the OmniBridge BIOS and allow it to coexist with the internal FDC of the computer in which it is being installed. This way you do not need to disable the internal FDC or connect any cables from the OmniBridge to internal floppy drives. This was found to be a universal setting for all of the computers listed above as compatible with the OmniBridge controller.

# Product Support Bulletin

Subject: Tape Backup System Test Results

Date: 6/13/89  
Page: 1 of 2

PSB No: S-0087  
Originator: MWT 

The Epson America Product Support Center has recently tested four tape backup systems:

|                               |                 |
|-------------------------------|-----------------|
| Archive VP - 150i             | Internal, 150MB |
| Mountain Series 4000 FileSafe | External, 40MB  |
| Tallgrass TG - 4060 +         | External, 60MB  |
| Tecmar QT - 60e               | External, 60MB  |

The tape drives were tested on a variety of systems (please see the notes below). In all cases, the drive manufacturer's documentation was used as a guide to installation and operation. Note that for 8086/88 computers, the XT- type settings were used. For the 80286/386 computers, the AT- type settings were used. This is important for correctly configuring the host adapters or controller cards for IRQ, DMA and I/O port address.

## Archive VP - 150i

The VP - 150i was tested on the Equity II +, III + and 386/20. Due to the capacity and nature of the drive, it is not particularly suited for use in any of the 8086/88 computers. This was the only drive supplied with Unix/Xenix device drivers. It was tested under MS - DOS 3.3 and SCO Xenix 286 System V version 2.2.1 with no problems encountered. The VP - 150i is also Novell tested and certified under the NetWare operating system.

## Mountain Series 4000 FileSafe

The Series 4000 FileSafe was tested on the Equity II+, III + and 386/20. Due to the use of a 16 - bit controller, it was not tested in any of the 8086/88 computers. It was tested under MS - DOS 3.3 with no problems encountered. A chapter is included in the tape software documentation on backup and restore operations on a local area network, including Novell.



#### Tallgrass TG - 4060 +

The TG- 4060+ was tested on the Apex, Apex +, Equity I +, II +, III + and 386/20. It was tested under MS- DOS 3.2 and 3.3 with no problems encountered. There is no documentation on LAN operations.

#### Tecmar QT - 60e

The QT- 60e was tested on the Equity I +, II + , III + and 386/20. Testing was conducted under MS - DOS 3.3 with no problems encountered. The Tecmar documentation includes extensive information on installation and operation in a LAN environment.

#### General Notes

Of the four units tested, the Archive and Tecmar drives offered the easiest installation. They also provided the best performance, with the Tallgrass drive giving the slowest disk-to-tape and tape - to- disk operations. All four drives were supplied with menu-driven tape utility software for the MS - DOS environment. Command-line and timed, scheduled operations are also available. As previously mentioned, the Archive drive also included device drivers for use in a Unix/Xenix environment, offering the greatest level of flexibility.

Please contact the manufacturers for additional information.

Archive Corporation  
Data Storage Division  
1650 Sunflower Ave.  
Costa Mesa, Ca. 92626  
(800) 237-4929

Mountain Computer, Inc.  
360 El Pueblo Rd.  
Scotts Valley, Ca. 95066  
(408) 438-6650

Tallgrass Technologies Corp.  
11100 West 82nd St.  
Overland Park, Ks. 66214  
(913) 492-6002

Tecmar, Inc.  
6225 Cochran Rd.  
Solon, Oh. 44139  
(216) 349-1009


# Product Support Bulletin

Subject: Apex / Apex Plus / Equity Series Keyboards

Date: 4/19/89

Page: 1 of 1

PSB No: S-0080

Originator: REM 

The purpose of this bulletin is to provide information on the various keyboards used with the Apex, Apex Plus and Equity series computers and the part numbers of the keyboard subassemblies used with these keyboards.

The Apex and Apex Plus computer keyboards are to be replaced as whole units.

The Equity series keyboards are repaired to the subassembly level. The Equity III keyboard PCB assembly is the only one that comes with the key top set attached.

Since some of the keyboards have the same model numbers, the difference can be determined by the FCC ID number in those cases.

The chart below provides a quick reference to determine the part number of the main keyboard PCB assembly, key top set, control logic subassembly, and keyboard cable.

| Apex / Apex Plus |               | Equity I, II, III |                   |             |                |
|------------------|---------------|-------------------|-------------------|-------------|----------------|
| Model            | Keyboard Unit | Model             | Keyboard PCB Assy | Key Top set | Keyboard Cable |
| Apex             | A265091A      | Equity I/II       | Y145501001        | Y145501021  | Y144305000     |
| Apex Plus        | 93553905410   | Equity III        | KAFLZ3AEPS1       | attached    | KACCL600UCA    |

## Equity I +, II +, III+, 386/20

| Model | Code       | FCC ID      | Keyboard PCB Assy | Control Board | Key Top set | Keyboard Cable |
|-------|------------|-------------|-------------------|---------------|-------------|----------------|
| Q203A | AA         | BKM9A8Q203A | Y127501001        | attached      | Y127501022  | Y127501031     |
| Q303A | AA         | BMK9A8Q303A | Y127501001        | attached      | Y127501022  | Y127501031     |
| Q203A | A103A - AA | C9S4D7Q203A | Y163502001        | none          | Y127501022  | Y163502020     |
| Q203A | A103A-AA   | C9S4DB4701  | Y163504007        | Y171501017    | Y127501022  | Y163504006     |

## Equity Ie

| Model  | Code | FCC ID          | Keyboard PCB Assy | Control Board | Key Top set | Keyboard Cable |
|--------|------|-----------------|-------------------|---------------|-------------|----------------|
| E1160A | -    | C9S4D84701- 201 | Y163504007        | Y171501017    | Y171501007  | Y171501006     |

# Product Support Bulletin

Subject: Installing a 3.5" 720KB FDD in the Apex Plus

Date: 4/19/89  
Page: 1 of 1

PSB No: S- 0079  
Originator: REM&

The newer version of the Apex Plus User's Guide states that the 3.5", 720KB FDD is not supported however, the system has been tested with and does support the Epson 3.5", 720KB drive (Model Code A112A - AA).

## Installing the 3.5" 720KB drive as drive B:

Ensure the Drive Select jumper on the 3.5" FDD is set to DS1. Replace the lower floppy drive with the -new 3.5" FDD. If the new FDD does not slide easily into the lower drive slot, then the top drive and the FDD chassis will have to be removed. The FDD chassis is held in with 1 screw on each side of the chassis at the front behind the front panel. After these 2 screws are removed, the disk drive chassis can be removed by lifting up and forward out of the retaining slots at the bottom. The 3.5" FDD can then be installed in the lower position and the FDD chassis can then be reinstalled in the computer. The top 5.25" FDD can then be installed and the system booted up with MS-DOS. In order for the system to recognize the B: drive as a 3.5", 720KB FDD, a CONFIG.SYS file with the following statement must be created or added to the existing CONFIG.SYS file:

DRIVPARM = /D:1/F:2

## Installing the 3.5" 720KB drive as drive A:

If installing the 3.5" 720 as drive A: it must first be installed as drive B: and a 3.5" MS- DOS system disk must be created. Boot the system with the MS - DOS system disk in drive A:.. Insert a blank 3.5" diskette in drive B then use FORMAT B:/S to format and copy the system files to the 3.5" diskette. Use COPY A:\*. \* B: to copy all the other MS - DOS files from the 5.25" diskette to the 3.5" diskette. In order for the system to recognize the A: drive as a 3.5", 720KB FDD, a CONFIG.SYS file with the following statement must be made or added to the existing CONFIG.SYS file:

DRIVPARM = /D:0/F:2

There are no dip switches or jumpers to change on the computer, but the drive select jumper on both floppy disk drives must be set to DS1.

The 5.25" FDD can then be installed as the lower B: drive and the 3.5" FDD can be installed as drive A:.

# Product Support Bulletin

Subject: Apex Plus Hardware and Software Compatibility Lists

Date: 4/19/89

Page: 1 of 8

PSB No: S-0078

Originator: REM 

The purpose of this bulletin is to provide a current listing of tested hardware and software for the Apex Plus.

All testing was performed by Seiko Epson Japan and the results were supplied to Epson America. This is not an all - inclusive list; there are many hardware options and applications that will work correctly that are not listed.

Unless otherwise noted, all tests were conducted with the latest release of the Apex Plus MS - DOS operating system software and ROM BIOS.

The products tested were certified in one of three ways:

- OK - Product works with full functionality
- NG - Product does not work - see compatibility note
- \* - Product works with partial functionality - see compatibility note

The information provided does not constitute a guarantee or endorsement of any particular product or any specific use or application. Some of the products on the list may have software or hardware requirements which are not met by the Apex Plus personal computer. Therefore, while EPSON believes the information supplied is accurate, EPSON does not assume any responsibility for use of any of the products on the attached list.

EPSON MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS LISTING OR THE PRODUCTS REFERENCED IN THE LIST. EPSON SHALL NOT BE LIABLE FOR ANY LOSS, INCONVENIENCE OR DAMAGE, INCLUDING DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OR INABILITY TO USE ANY OF THE PRODUCTS LISTED.

## HARDWARE COMPATIBILITY LIST

| Product                                  | Vendor                       | Works | Notes |
|--|------------------------------|-------|-------|
| <u>Communication</u>                     |                              |       |       |
| AST 5251 Emulation Adapter               | AST Research                 | ok    |       |
| Asynchronous Adapter                     | IBM Corporation              | ok    |       |
| Hayes Smartmodem 1200B                   | Hayes Microcomputer Products | ok    |       |
| CopyII PC Option Board                   | Central Point Software       | ok    |       |
| IBM 3278/3279 Emulation Adapter          | IBM Corporation              | ok    |       |
| IBM PC Network Adapter II                | IBM Corporation              | ok    |       |
| IBM Token Ring Network Adapter           | IBM Corporation              | ok    |       |
| SDLC Board                               | IBM Corporation              | ok    |       |
| <u>Mass Storage</u>                      |                              |       |       |
| HardCard 20                              | Mountain Computer Inc.       | ok    |       |
| <u>Memory Cards</u>                      |                              |       |       |
| Above Board PC                           | Intel Corporation *          | ok    |       |
| Fastcard IV                              | THESYS Memory Products       | ok    |       |
| RAMpage                                  | AST Research                 | *     | 1     |
| Six Pak Plus                             | AST Research                 |       | 1     |
| <u>Peripheral Ports</u>                  |                              |       |       |
| IBM Game Control Card                    | IBM Corporation              | ok    |       |
| Parallel Board                           | IBM Corporation              | ok    |       |
| <u>Pointing Devices</u>                  |                              |       |       |
| tight Pen                                | FTG - DATA System            | ok    |       |
| Joystick                                 | KRAFT                        | ok    |       |
| KoalaPad Touch Tablet                    | Koala Technologies Corp.     | ok    |       |
| Microsoft Bus Mouse (5.03)               | Microsoft Corporation        | ok    |       |
| Microsoft Bus Mouse and Adapter          | Microsoft Corporation        | ok    |       |
| Microsoft Serial Mouse                   | Microsoft Corporation        | ok    |       |
| Mouse Tablet                             | EPSON                        | ok    |       |
| <u>Video Cards</u>                       |                              |       |       |
| Auto Switch EGA                          | Paradise System              | ok    |       |
| Enhanced Graphics Adapter                | IBM Corporation              | ok    |       |
| EPSON Color Graphics Adapter             | EPSON                        | ok    | 2     |
| EPSON Monochrome Display Adapter         | EPSON                        | ok    |       |
| Hercules Graphics Adapter                | Hercules Computer Technology | ok    |       |
| IBM Color Graphics Adapter               | IBM Corporation              | ng    | 3     |
| IBM Monochrome Display & Printer Adapter | IBM Corporation              | ok    |       |
| MGA Board                                | EPSON                        | ok    |       |
| Modular Graphics Card                    | Paradise System Inc.         | ok    |       |

HARDWARE COMPATIBILITY LIST  
- alphabetically -

| Product                                  | Vendor                       | Works | Notes |
|--|------------------------------|-------|-------|
| AST 5251 Board                           | AST Research                 | ok    |       |
| Asynchronous Adapter                     | IBM Corporation              | ok    |       |
| Auto Switch EGA                          | Paradise System              | ok    |       |
| CopyII PC Option Board                   | Central Point Soft           | ok    |       |
| Enhanced Graphics Adapter                | IBM Corporation              | ok    |       |
| EPSON Color Graphics Adapter             | EPSON                        | ok    | 2     |
| EPSON Monochrome Display Adapter         | EPSON                        | ok    |       |
| Fastcard IV                              | THESYS Memory Products       | ok    |       |
| HardCard 20                              | Mountain Computer Inc.       | ok    |       |
| Hayes Smartmodem 12008                   | Hayes Microcomputer Products | ok    |       |
| Hercules Graphics Adapter                | Hercules Computer Technology | ok    |       |
| IBM 3278/3279 Emulation Adapter          | IBM Corporation              | ok    |       |
| IBM Color Graphics Adapter               | IBM Corporation              | ng    | 3     |
| IBM Game Control Card                    | IBM Corporation              | ok    |       |
| IBM Monochrome Display & Printer Adapter | IBM Corporation              | ok    |       |
| IBM PC Network Adapter II                | IBM Corporation              | ok    |       |
| IBM Token Ring Network Adapter           | IBM Corporation              | ok    |       |
| Joystick                                 | KRAFT                        | ok    |       |
| KoalaPad Touch Tablet                    | Koala Technologies Corp.     | ok    |       |
| Light Pen                                | FTG - DATA System            | ok    |       |
| MGA Board                                | EPSON                        | ok    |       |
| Microsoft Bus Mouse and Adapter          | Microsoft Corporation        | ok    |       |
| Microsoft Bus Mouse (5.03)               | Microsoft Corporation        | ok    |       |
| Microsoft Serial Mouse                   | Microsoft Corporation        | ok    |       |
| Modular Graphics Card                    | Paradise System Inc.         | ok    |       |
| Mouse Tablet                             | EPSON                        | ok    |       |
| Parallel Board                           | IBM Corporation              | ok    |       |
| RAMpage                                  | AST Research                 |       | 1     |
| SDLC Board                               | IBM Corporation              | ok    |       |
| Six Pak Plus                             | IBM Corporation              |       | 1     |

## APEX PLUS Compatibility Report Notes

### - Hardware -

#### Note 1:

RAM page  
Six Pak Plus

When the machine has only 1 FDD, the "SUPERDRV" function does not work correctly and the A drive cannot be accessed.

#### Note 2:

EPSON Color Graphics Adapter

The screen becomes disordered when the screen is scrolled, for example executing DIR command.

#### Note 3:

IBM Color Graphics Adapter

The screen flashes when the system is booted and the same phenomena of Note 2 occurs when the screen is scrolled.

## SOFTWARE COMPATIBILITY LIST

| Product                    | Version | Vendor                         | Works | Notes |
|----------------------------|---------|--------------------------------|-------|-------|
| <u>Communication</u>       |         |                                |       |       |
| MOVE IT                    | 3.0     | WOOLF SOFT                     | ok    |       |
| PC - TALK4                 | R.1533  | Headlands Communications Corp. | ok    |       |
| <u>Database</u>            |         |                                |       |       |
| dBASE III                  | 1.1     | Ashton - Tate                  | ok    |       |
| dBASE III Plus             | 1.1     | Ashton - Tate                  | ok    |       |
| R:BASE System V            | 1.1     | Microrim                       | ok    |       |
| REFLEX THE ANALYST         | 1985    | Borland International, Inc.    | ok    | 1     |
| <u>Desktop Manager</u>     |         |                                |       |       |
| GEM Desktop                | 1.2     | Digital Research, Inc.         | ok    |       |
| Microsoft Windows          | 1.01    | Microsoft Corp.                | ok    |       |
| <u>Desktop Publishing</u>  |         |                                |       |       |
| pfs:First Publisher        | 1.00    | Software Publishing Corp.      | ok    |       |
| <u>Entertainment</u>       |         |                                |       |       |
| Frogger                    | 1983    | Sierra On - Line, Inc.         | ok    |       |
| King's Quest               | 1984    | Sierra On - Line Inc.          | ok    |       |
| King's Quest III           | 1986    | Sierra On - Line Inc.          | ok    |       |
| Lode Runner                | 1983    | Broderbund Software            | ok    |       |
| Microsoft Decathlon        | 1982    | Microsoft Corporation          | ok    |       |
| Microsoft Flight Simulator | 2.1     | Microsoft Corporation          | ok    | 2     |
| Microsoft Flight Simulator | 3.0     | Microsoft Corporation          | ok    |       |
| Nightmission PIN BALL      | 1982    | SUBLOGIC                       | ok    |       |
| Sargon III                 | 1984    | Haydon Software                | ok    |       |
| TAPPER                     | 1983    | Mfg Corp.                      | ok    |       |
| Wizardry                   | 1981    | Sir - tech Software, Inc.      | ok    |       |
| Zork I                     | R.88    | Infocom Inc.                   | ok    |       |
| <u>Graphics</u>            |         |                                |       |       |
| AutoCAD                    | 2.52    | Autodesk, Inc.                 | ok    |       |
| Freelance Plus             | 2.0     | Lotus Development Corp.        | ok    |       |



| Product                           | Version | Vendor                               | Works | Notes |
|-----------------------------------|---------|--------------------------------------|-------|-------|
| <u>Integrated Software</u>        |         |                                      |       |       |
| Framework I I                     | 1.1     | Ashton - Tate                        | ok    |       |
| pfs:First Choice                  | 2.00    | Software Publishing Corporation      | ok    |       |
| Symphony                          | 1.2     | Lotus Development Corp.              | ok    |       |
| <u>Language</u>                   |         |                                      |       |       |
| Microsoft Quick C                 | 1.0     | Microsoft Corporation                | ok    |       |
| <u>Operating System</u>           |         |                                      |       |       |
| Concurrent PC - DOS               | 5.0     | Digital Research Inc.                | ok    |       |
| IBM PC - DOS 3.20                 | 3.20    | IBM Corporation                      | ok    |       |
| Xenix Operating System V for 86XT | 2.1     | Santa Cruz Operating Inc.            | ok    |       |
| <u>Spreadsheet</u>                |         |                                      |       |       |
| Lotus 1-2-3                       | R.2     | Lotus Development Corp.              | ok    |       |
| SuperCalc 3                       | 2.1     | Membership Service, Inc.             | ok    |       |
| <u>Utilities</u>                  |         |                                      |       |       |
| Direct Access                     | 4.0     | Delta Technology International, inc. | ok    |       |
| Fastback Plus                     | 5.13    | Fifth Generation Systems, Inc.       | ok    |       |
| Norton Commander                  | 1.00    | Peter Norton Computing               | ok    |       |
| Norton Utilities                  | 3       | Peter Norton Computing               | ok    |       |
| SideKick                          | 1.56A   | Borland International, Inc.          | ok    |       |
| SuperKey                          | 1.0     | Borland International, Inc.          | ok    |       |
| Turbo Lightning                   | 1985    | Borland International, Inc.          | ok    |       |
| <u>Word Processing</u>            |         |                                      |       |       |
| Bank Street Writer Plus           | 1986    | Brouderbund Software                 | ok    |       |
| Microsoft Word                    | 3.1     | Microsoft Corporation                | ok    |       |
| WordPerfect                       | 4.1     | WordPerfect Corporation              | ok    |       |
| WordStar 2000 Plus                | 1.00    | MicroPro International               | ok    |       |
| <u>Others</u>                     |         |                                      |       |       |
| Dollars and Sense                 | 2.0     | Star/Monogram                        | ok    |       |

SOFTWARE COMPATIBILITY LIST  
- alphabetically -

| Product                    | Version | Vendor                               | Works | Notes |
|----------------------------|---------|--------------------------------------|-------|-------|
| AutoCAD                    | 2.52    | Autodesk, Inc.                       | ok    |       |
| Bank Street Writer Plus    | 1986    | Broderbund Software                  | ok    |       |
| Concurrent PC - DOS        | 5.0     | Digital Research Inc.                | ok    |       |
| dBASE III                  | 1.1     | Ashton - Tate                        | ok    |       |
| dBASE III Plus             | 1.1     | Ashton - Tate                        | ok    |       |
| Direct Access              | 4.0     | Delta Technology International, Inc. | ok    |       |
| Dollars and Sense          | 2.0     | Star/Monogram                        | ok    |       |
| Fastback Plus              | 5.13    | Fifth Generation Systems, Inc.       | ok    |       |
| Framework II               | 1.1     | Ashton - Tate                        | ok    |       |
| Freelance Plus             | 2.0     | Lotus Development Corp.              | ok    |       |
| Frogger                    | 1983    | Sierra On - line, Inc.               | ok    |       |
| GEM Desktop                | 1.2     | Digital Research, Inc.               | ok    |       |
| IBM PC - DOS 3.20          | 3.20    | IBM Corporation                      | ok    |       |
| King's Quest               | 1984    | Sierra On - Line Inc.                | ok    |       |
| King's Quest III           | 1986    | Sierra On - Line Inc.                | ok    |       |
| Lode Runner                | 1983    | Broderbund Software                  | ok    |       |
| Lotus 1-2-3                | R.2     | Lotus Development Corp.              | ok    |       |
| Microsoft Decathlon        | 1982    | Microsoft Corporation                | ok    |       |
| Microsoft Flight Simulator | 2.1     | Microsoft Corporation                |       | 2     |
| Microsoft Flight Simulator | 3.0     | Microsoft Corporation                | ok    |       |
| Microsoft Quick C          | 1.0     | Microsoft Corporation                | ok    |       |
| Microsoft Windows          | 1.01    | Microsoft Corporation                | ok    |       |
| Microsoft Word             | 3.1     | Microsoft Corporation                | ok    |       |
| MOVE IT                    | 3.0     | WOOLF SOFT                           | ok    |       |
| Nightmission PIN BALL      | 1982    | SUBLOGIC                             | ok    |       |
| Norton Commander           | 1.00    | Peter Norton Computing               | ok    |       |
| Norton Utilities           | 3       | Peter Norton Computing               | ok    |       |
| PC - TALK4                 | R.1533  | Headlands Communications Corp.       | ok    |       |
| pfs: First Choice          | 2.00    | Software Publishing Corporation      | ok    |       |
| pfs:First Publisher        | 1.00    | Software Publishing Corp.            | ok    |       |
| R:BASE System V            | 1.1     | Microrim                             | ok    |       |
| REFLEX THE ANALYST         | 1985    | Borland International, Inc.          | ok    | 1     |
| Sargon III                 | 1984    | Haydon Software                      | ok    |       |
| SideKick                   | 1.56A   | Borland International, Inc.          | ok    |       |

| Product                           | Version | Vendor                       | Works | Notes |
|-----------------------------------|---------|------------------------------|-------|-------|
| SuperCalc 3                       | 2.1     | Membership Service, Inc.     | ok    |       |
| SuperKey                          | 1.0     | Borland International, Inc.  | ok    |       |
| Symphony                          | 1.2     | Lotus Development Corp.      | ok    |       |
| TAPPER                            | 1983    | Mfg Corp.                    | ok    |       |
| Turbo Lightning                   | 1985    | Borland International, Inc.  | ok    |       |
| Wizardry                          | 1981    | Sir-tech Software, Inc.      | ok    |       |
| WordPerfect                       | 4.1     | WordPerfect Corporation      | ok    |       |
| WordStar 2000 Plus                | 1.00    | MicroPro International Corp. | ok    |       |
| Xenix Operation System V for 86XT | 2.1     | Santa Cruz Operating Inc.    | ok    |       |
| Zork I                            | R.88    | Infocom Inc.                 | ok    |       |

## APEX PLUS Compatibility Report Notes

### - Software -

#### Note 1:

##### REFLEX THE ANALYST

It is impossible to copy GRAPHICS.COM to a floppy disk because REFLEX THE ANALYST does not support MS- DOS 3.20.

#### Note 2:

##### Microsoft Flight Simulator (Ver. 2.1)

A mouse cannot be used with MS - DOS 3.20. As Microsoft Flight Simulator (Ver. 2.1) does not support MS - DOS 3.20, it requires MS - DOS 3.10 or previous versions to use the mouse. When you use Microsoft Flight Simulator Ver. 3.0, the mouse can be used.

# EPSON

EPSON AMERICA, INC.

## SERVICE

## PRODUCT SUPPORT BULLETIN

PSB NO. : S-0074

DATE: 3/17/89

ORIGINATOR: REM 

PAGE: 1 of 1

**SUBJECT: APEX PLUS - GW-BASIC 3.2 UPDATE FOR HERCULES GRAPHICS**

The purpose of this bulletin is to provide information on a solution to a problem using GW-BASIC in Hercules Graphics mode with the Apex Plus computer.

Epson GW-BASIC 3.2 (version 1.04) and the multimode video graphics adapter in the Apex Plus support Hercules Graphics. However, when using the Epson GW-BASIC 3.2 (version 1.04) for Hercules Graphics it will not work with the Apex Plus except in the following cases:

1. When a different Hercules Graphics board is used.
2. After enabling the Hercules mode by using another application. ie: by displaying a graph in PFS First Choice then exiting First Choice and loading GW-BASIC.

This is caused by the video board check routine in the GW-BASIC software which mistakenly determines that the video board is MDA. If the Hercules mode is used by another application, it will enable the video board Hercules Graphics mode.

A new version of Epson's GW-BASIC (version 1.05) has been developed to correct this problem in the Apex Plus.

GW-BASIC (version 1.05) is available from Epson's Computer Product Support and will be supplied free of charge to customers who request it. Customers can either contact Epson's Computer Product Support department by calling our Consumer Support number at (213) 539-9955, send requests via FAX (213) 530-9802 or write to:

Epson America Inc.  
26310 Telo Avenue  
Torrance, CA 90505

Attn. Computer Product Support M/S 6-12

PSB NO.: S-0065

DATE: 1/5/89

ORIGINATOR:

REM/

PAGE: 1 of 1

SUBJECT: DISABLING THE FLOPPY DISK CONTROLLER IN EPSON COMPUTERS

This bulletin covers the ability or inability to disable the floppy disk controller in the Epson computers.

| COMPUTER                     | FDC CAN<br>BE<br>DISABLED | HOW  |
|------------------------------|---------------------------|--|
| Equity I                     | No                        |  |
| Equity II                    | No                        |  |
| Equity III                   | Yes                       | CPU Board - Switch 2-3 off   |
| Equity I+                    | Yes                       | CPU Brd - Jumper 1 in Position B   |
| Equity II+<br>10MHz<br>12MHz | No<br>Yes                 | Multi-function Board<br>- Jumper 2 in Position B                             |
| Equity III+                  | Yes                       | Multi-function Board<br>- Jumper 1 in Position B<br>- Jumper 2 in Position B |
| Apex                         | Yes                       | Motherboard - Remove Jumper E1   |
| Apex Plus                    | No                        |  |